

REMARKS

Claims 1-16 remain pending in the present application. Claim 1 has been amended. Claim 17 has been cancelled. Basis for the amendments can be found throughout the specification, claims and drawings as originally filed.

REJECTION UNDER 35 U.S.C. § 112

Claims 1-17 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant respectfully traverses this rejection.

The Examiner states that Applicant relies at least in part upon the last passages of Claim 1 for patentability. The last paragraph of Claim 1 reads:

“a valve assembly disposed between said shock absorber and said spring, said valve assembly always being in direct communication with said fluid in said spring for controlling damping characteristics of said shock absorber as said specified height based upon the pressure of said fluid in said spring.”

The limitation of “based upon the pressure of said fluid in said spring” were added in an amendment filed June 8, 2005 and the Examiner considers this to be new matter. Applicant respectfully traverses this finding by the Examiner.

Paragraph [0016] states “control system 30 activates compressor 36 to supply pressurized air to the air spring 22 adjacent to the specific height sensor 32. The

pressurized air extends the individual air spring 22 to raise vehicle body 12 back to its specified height. Connecting line 38 supplies pressurized air to the adjacent shock absorber 20 or 26 to adjust the damping characteristics of the adjacent shock absorber 20 or 26 as will be detailed below. When one or more of height sensors 32 indicates that the position of vehicle body 12 is higher than a specific amount, the control system 30 releases air pressure from the air spring 22 adjacent to the specific height sensor 32. The release of pressurized air lowers vehicle body 12 back to the specified height. Connecting line 38 releases pressurized air from the adjacent shock absorber 20 or 26 to adjust the damping characteristics of the adjacent shock absorber 20 or 26 as will be described below."

Thus, Applicant believes it is clear that control system 30 controls the fluid pressure within the air springs based on the height of the vehicle and the fluid pressure from the air springs is supplied to the shock absorbers. The amount of fluid pressure being supplied to the shock absorbers through connecting line 38 determines the damping characteristics of the shock absorber. Applicant believes there is disclosure in the originally filed specification to support control of the damping characteristics of the shock absorber by control system 30 as well as support for control of the damping characteristics of the shock absorber by the pressure of air in the air spring because the pressure of air in the air spring is delivered directly to the shock absorber by connecting line 38.

Variable valve assembly 100 controls the damping characteristics based upon the fluid pressure supplied to it. Paragraph [0027] states that when connecting line 38 is sealingly attached to nipple assembly 116, the pressurized fluid within the adjacent air

spring 22 is in communication with the second pressure chamber 170. The amount of pressure within air spring 22 will determine the load urging end portion 158 against plunger seat 116 and this will in turn determine the fluid pressure within upper working chamber 48 required to unseat end portion 158 from plunger seat 116 and allow fluid flow between upper working chamber 48 and reserve chamber 52.

Paragraph [0028] describes the soft damping characteristics when the pressure within air spring 22 is reduced by control system 30 which simultaneously reduces the air pressure in connecting line 38. Paragraph [0029] describes the firm damping characteristics when the pressure within air spring 22 is increased by control system 30 which simultaneously increases the air pressure in connecting line 38. Paragraph [0029] ends with "The degree of damping will be controlled by the force being exerted by air pressure from spring 22 against plunger 154 which is biased against seat 116." (emphasis added).

This last line clearly supports the limitation "based upon the fluid pressure in the springs". While control system 30 changes the fluid pressure in the springs, it is the fluid pressure in the springs that is supplied to valve 100 by the connecting lines 38 that controls the damping characteristics of the shock absorbers.

Applicant believes it is actually more accurate to define the air pressure in the spring as controlling the damping load. Assuming that control system 30 fails, and fluid pressure within the air spring increases due to an increased loading of the vehicle. The damping characteristics of the shock absorbers would also change due to the increase in air pressure in the spring and not by actuation of control system 30. Thus, it is the fluid pressure in the spring that directly controls the damping characteristics. Control

system 30 indirectly controls the damping characteristics by changing the fluid pressure in the spring.

Thus, Applicant believes Claims 1-16 are fully supported by the specification as originally filed. Claim 17 has been cancelled. Reconsideration of the rejection is respectfully requested.

REJECTION UNDER 35 U.S.C. § 103

Claims 1-3, 9 and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over De Molina ('239) in view of Buma, et al. ('554). Claims 4-16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over De Molina in view of Buma as applied to Claim 3 above, and further in view of either Heinz, et al. or Patzenhauer, et al. '885. Applicant respectfully traverses this rejection.

Claim 1 defines the valve assembly as always being in direct communication with the fluid in the spring for controlling damping characteristics of the shock absorber at the specified height based upon the pressure of the fluid in the spring.

As stated by the Examiner, De Molina '239 does not have a distance determining means between the unsprung and sprung portions of the vehicle and thus De Molina does not control the height of the vehicle. De Molina controls the damping of the shock absorber based upon driving conditions sensed by sensor control 54 to provide firm damping by connecting the shock absorber to the air spring when the load is uneven or to provide soft damping by connecting the shock absorber to the air spring through low pressure circuit 32 when the road is even (column 4, lines 55 – column 5, line 22).

Buma, et al. discloses a distance determining means which controls the vehicle's attitude but Buma, et al. does not disclose controlling damping characteristics.

Combining Buma, et al. with De Molina will not disclose, teach or suggest a damping system as defined in Claim 1. By adding the disclosure of Buma, et al. to De Molina may provide De Molina with control of the vehicle's attitude but it will not provide a system where the valve assembly is always in direct communication with the fluid in the spring as is defined in Claim 1. Even with attitude control added, De Molina will still be able to select firm or soft and will thus put low pressure circuit 32 between the shock absorber and the spring. Claim 1 defines the valve as always being in direct communication with the spring.

Thus, Applicant believes Claim 1, as amended, patentably distinguishes over the art of record. Likewise, Claims 2-16, which ultimately depend from Claim 1, are also believed to patentably distinguish over the art of record. Claim 17 has been cancelled. Reconsideration of the rejection is respectfully requested.

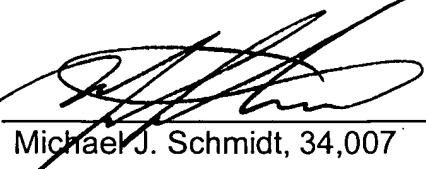
CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner

believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

By:


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